

SEQUENCE LISTING

<110> AKZO Nobel N.V.

<120> Shiga-like toxin vaccine

<130> 2003.006

<160> 4

<170> PatentIn version 3.2

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<212> DNA

<213> Escherichia coli

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<221> CDS

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Phe Ser Ser Val Ser Tyr Ser Gln Glu Phe Thr Ile Asp Phe Ser Thr	
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caa caa agt tat gta tct tcg tta aat agt ata cgg aca gtg ata tcg	144
Gln Gln Ser Tyr Val Ser Ser Leu Asn Ser Ile Arg Thr Val Ile Ser	
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acc cct ctt gaa cat ata tct cag gga gct aca tcg gta tcc gtt att	192
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gat gtt tat cag gag cgt ttt gac cat ctt cgt ctg att att gaa cga	288
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85 90 95	

aat aat tta tat gtg gct gga ttt gtt aat acg aca aca aat act ttc	336
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tac aga ttt tca gat ttt gca cat ata tca ttg ccc ggt gtg aca act	384
Tyr Arg Phe Ser Asp Phe Ala His Ile Ser Leu Pro Gly Val Thr Thr	
115 120 125	

att tcc atg aca acg gac agc agt tat acc act ctg caa cgt gtc gca	432
Ile Ser Met Thr Thr Asp Ser Ser Tyr Thr Thr Leu Gln Arg Val Ala	
130 135 140	

gcg ctg gaa cgt tcc gga atg caa atc agt cgt cac tca ctg gtt tca	480
Ala Leu Glu Arg Ser Gly Met Gln Ile Ser Arg His Ser Leu Val Ser	
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Ser Tyr Leu Ala Leu Met Glu Phe Ser Gly Asn Thr Met Thr Arg Asp	
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gct cct gtt tat acg atg acg ccg gaa gac gtg gac ctc act ctg aac		672	
Ala Pro Val Tyr Thr Met Thr Pro Glu Asp Val Asp Leu Thr Leu Asn			
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Trp Gly Arg Ile Ser Asn Val Leu Pro Glu Tyr Arg Gly Glu Ala Gly			
225	230	235	240
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Val Arg Val Gly Arg Ile Ser Phe Asn Asn Ile Ser Ala Ile Leu Gly			
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act gtg gcc gtt ata ctg aat tgt gga aat tca tca aga aca atc aca		816	
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ggt gat act tgt aat gag gag acc cag aat ctg agc aca ata tat ctc		864	
Gly Asp Thr Cys Asn Glu Glu Thr Gln Asn Leu Ser Thr Ile Tyr Leu			
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catttaagag cggcgaaaca tttcaggtcg aagtcccccgg cagtcaacat atagactccc		1194	
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Gln Gln Ser Tyr Val Ser Ser Leu Asn Ser Ile Arg Thr Val Ile Ser			
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Thr Pro Leu Glu His Ile Ser Gln Gly Ala Thr Ser Val Ser Val Ile
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Asn His Thr Pro Pro Gly Ser Tyr Ile Ser Val Gly Ile Arg Gly Leu
65 70 75 80

Asp Val Tyr Gln Glu Arg Phe Asp His Leu Arg Leu Ile Ile Glu Arg
85 90 95

Asn Asn Leu Tyr Val Ala Gly Phe Val Asn Thr Thr Asn Thr Phe
100 105 110

Tyr Arg Phe Ser Asp Phe Ala His Ile Ser Leu Pro Gly Val Thr Thr
115 120 125

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130 135 140

Ala Leu Glu Arg Ser Gly Met Gln Ile Ser Arg His Ser Leu Val Ser
145 150 155 160

Ser Tyr Leu Ala Leu Met Glu Phe Ser Gly Asn Thr Met Thr Arg Asp
165 170 175

Ala Ser Arg Ala Val Leu Arg Phe Val Thr Val Thr Ala Glu Ala Leu
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Arg Phe Arg Gln Ile Gln Arg Glu Phe Arg Leu Ala Leu Ser Glu Thr
195 200 205

Ala Pro Val Tyr Thr Met Thr Pro Glu Asp Val Asp Leu Thr Leu Asn
210 215 220

Trp Gly Arg Ile Ser Asn Val Leu Pro Glu Tyr Arg Gly Glu Ala Gly
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Val Arg Val Gly Arg Ile Ser Phe Asn Asn Ile Ser Ala Ile Leu Gly
245 250 255

Thr Val Ala Val Ile Leu Asn Cys Gly Asn Ser Ser Arg Thr Ile Thr
260 265 270

Gly Asp Thr Cys Asn Glu Glu Thr Gln Asn Leu Ser Thr Ile Tyr Leu
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gtcagagtggtt ggagaatatc cttaataat atatcagcga tacttggtac tgtggccgtt      780
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cagaatctga gcacaatata tctcaggaa tatcaatcaa aagttaagag gcagatattt      900
tcagactatc agtcagaggt tgacatata aacagaattc gggatgaatt atg aat      956
                                         Met Asn
                                         1

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Lys Val Lys Cys Tyr Val Leu Phe Thr Ala Leu Leu Ser Ser Leu Tyr
      5          10          15

gca cac gga gct ccc cag act att aca gaa cta tgt tcg gaa tat cgc      1052
Ala His Gly Ala Pro Gln Thr Ile Thr Glu Leu Cys Ser Glu Tyr Arg
      20          25          30

aac aca caa ata tat acg ata aat gac aag ata cta tca tat acg gaa      1100
Asn Thr Gln Ile Tyr Thr Ile Asn Asp Lys Ile Leu Ser Tyr Thr Glu
      35          40          45          50

tcg atg gca ggc aaa aga gaa atg gtt atc att aca ttt aag agc ggc      1148
Ser Met Ala Gly Lys Arg Glu Met Val Ile Ile Thr Phe Lys Ser Gly
      55          60          65

gaa aca ttt cag gtc gaa gtc ccg ggc agt caa cat ata gac tcc cag      1196
Glu Thr Phe Gln Val Glu Val Pro Gly Ser Gln His Ile Asp Ser Gln
      70          75          80

aaa aaa gcc att gaa agg atg aag gac aca tta aga atc aca tat ctg      1244
Lys Lys Ala Ile Glu Arg Met Lys Asp Thr Leu Arg Ile Thr Tyr Leu

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85

90

95

acc gag acc aaa att gat aaa tta tgt gta tgg aat aat aaa acc ccc 1292
Thr Glu Thr Lys Ile Asp Lys Leu Cys Val Trp Asn Asn Lys Thr Pro
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aat tca att gcg gca atc agt atg aaa aac tag 1325
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Thr Glu Ser Met Ala Gly Lys Arg Glu Met Val Ile Ile Thr Phe Lys
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Ser Gly Glu Thr Phe Gln Val Glu Val Pro Gly Ser Gln His Ile Asp
65 70 75 80

Ser Gln Lys Lys Ala Ile Glu Arg Met Lys Asp Thr Leu Arg Ile Thr
85 90 95

Tyr Leu Thr Glu Thr Lys Ile Asp Lys Leu Cys Val Trp Asn Asn Lys
100 105 110

Thr Pro Asn Ser Ile Ala Ala Ile Ser Met Lys Asn
115 120